

Massachusetts Institute of Technology
Instrumentation Laboratory
Cambridge, Massachusetts

LUMINARY Memo #107

To: Distribution
From: C. Schulenberg
Date: 20 August 1969
Subject: LUMINARY Revisions 114 - 116

Major Changes Incorporated into Revision 114

- 1) A TCF instruction was inserted into the stall loop of the C13STALL routine to prevent any chance of a TC TRAP occurrence during a long stall. The maximum stall made by this routine is about 5.94 milliseconds and the TC TRAP logic is supposed to activate if a period of somewhere between five and fifteen milliseconds elapses without a TC instruction being executed.
- 2) PCR 856 was implemented (Change 1502/1206 from POODOO's to BAILOUT's).

Major Changes Incorporated into Revision 115

- 1) A missing INHINT instruction was added to Verb 77. The subroutine ZATTEROR (Zero DAP attitude errors) which is called by the Verb 77 routine must be executed with interrupts inhibited.
- 2) The erasables for the new noun 69 (PCR 854) were corrected. R1 of noun 69 (down-range correction to landing site) was being clobbered by the conic routines called by P63.

Major Changes Incorporated into Revision 116

- 1) A program error was corrected in the coding of R12 that had been inserted for the implementation of PCR 839 (R12 and LR Re-position Routine Improvements). The bug caused incorrect program performance in the event that a PROCEED response was keyed in to the flashing V05N09 (R1=523) display indicating failure of the LR antenna reposition.

Note: Revision 116 was manufactured and sent to Raytheon on August 12, 1969 as the official LUMINARY 1B release. The author and drawing number is NASA 2021112-071.